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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,864	03/29/2004	Charles A. Casey	ONS00514	9852

7590 07/27/2005

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EXAMINER

LAXTON, GARY L

ART UNIT PAPER NUMBER

2838

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/810,864

**Applicant(s)**

CASEY ET AL.

**Examiner**

Gary L. Laxton

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/29/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Inventorship***

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Specification***

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1-6, 12, 14, 19, 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “deleting a first drive pulse...; and deleting the first drive pulse from the first timing slot and a second drive pulse...”. Is the applicant claiming that the first pulse gets deleted twice? If so, would the applicant explain how that happens? The examiner assumes that the first pulse is deleted only once. Claims 2-6 inherit the same.

Claims 6, 12 and 19 recite re-inserting deleted pulses. If the pulse is deleted, the pulse is gone; therefore, how is it possible to re-insert the deleted pulse? The examiner assumes that drive pulses are re-enabled. Claims 14 and 20 inherit the same from claims 12 and 19.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-5, 7-11, 13, 17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kernahan (US 6,917,188).

Claims 1-5. A method of operating a power supply controller comprising: organizing output drive pulses of the power supply controller to into a plurality of sets with each set of the

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plurality of sets having a plurality of timing slots for the output drive pulses; deleting a first drive pulse in a first set of the plurality of sets from a first timing slot when a load current of the power supply controller is less than a first current value; and deleting the first drive pulse from the first timing slot and a second drive pulse from a second timing slot in a second set of the plurality of sets after the power supply controller has issued the first set (col. 54 lines 49-64; col. 102 lines 19-28 and col. 103 lines 50-65).

Claims 7-11, 13, 15 and 16; Kernahan disclose a method of forming a power supply controller comprising: forming the power supply controller to organize output drive pulses into a plurality of sets with each set having a plurality of timing slots for the output drive pulses; forming the power supply controller to delete a first drive pulse in a first set of the plurality of sets from a first timing slot when a load current of the power supply controller is less than a first current value; and forming the power supply controller to delete a second drive pulse from a second timing slot a second set of the plurality of sets after the power supply controller has issued the first set (col. 54 lines 49-64; col. 102 lines 19-28 and col. 103 lines 50-65).

Claims 17 and 18; Kernahan disclose a power supply controller comprising: an output coupled to drive an output transistor to provide a load current through an energy storage inductor to form an output voltage; and a control block coupled to organize drive pulses to the output transistor into a plurality sets having a plurality of timing slots for driving the output transistor wherein the control block provides a control signal to delete a first drive pulse in a first set of the plurality of sets from a first timing slot when the load current is less than a first current value (col. 54 lines 49-64; col. 102 lines 19-28 and col. 103 lines 50-65).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 12, 14, 19 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Kernahan (US 6,917,188) in view of Hwang (US 5,747,977) .

Kernahan disclose the claimed subject matter in regards to claim 1 except for re-enabling one deleted drive pulse when an output voltage formed by the output drive pulses decreases to a first voltage.

Hwang teaches re-enabling pulses once power supplied to the load rises above the light load threshold.


Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kernahan to re-enable one drive pulse when an output voltage formed by the output drive pulses decreases to a first voltage as taught by Hwang in order to provide sufficient amounts of power to the load as the load comes out of the light load mode.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Gary L. Laxton  
Primary Examiner  
Art Unit 2838  
7/25/05